

ISCAP APPEAL NO. 2013-027, document no. 11
DECLASSIFICATION DATE: September 29, 2014

Wth Monday trip
~~CONFIDENTIAL~~

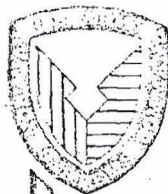
ROUTING AND TRANSMITTAL SLIP		ACTION
1 TO <i>Mr. Hawkins</i>	INITIALS	CIRCULATE
	DATE	COORDINATION
2 <i>Dr. Hansen</i> <i>Mr. Samuels</i>	INITIALS	FILE
	DATE	INFORMATION
3 <i>Mr. Weiss</i>	INITIALS	NOTE AND RETURN
	DATE	PER CON - VERSATION
4	INITIALS	SEE ME
	DATE	SIGNATURE
REMARKS <i>Attached are (1) copies of slides (backup) used at the time of the presentation of those already in your possession and (2) copy of a memo signed by Dep Sec Def on BUSHMASTER for your info. LTC Cass's office wanted you to have in preparation for 19-20 Aug. Resp., Dick</i>		
FROM AUBRA N. BONE Lieutenant Colonel, GS Executive Secretary Army Scientific Advisory Panel		DATE <i>8/8/75</i> PHONE <i>202 695-1447</i>

OPTIONAL FORM NO. 10
AUGUST 1967
GSA FPMR (41CFR) 100-11.204

5010-108 OF 1-552-828 5041-101

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~~Regraded UNCLASSIFIED~~
~~When copy is made~~
~~CLASSIFIED inclosures~~



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EFFECTIVENESS/ANTI-PERSONNEL/AH-1 COBRA

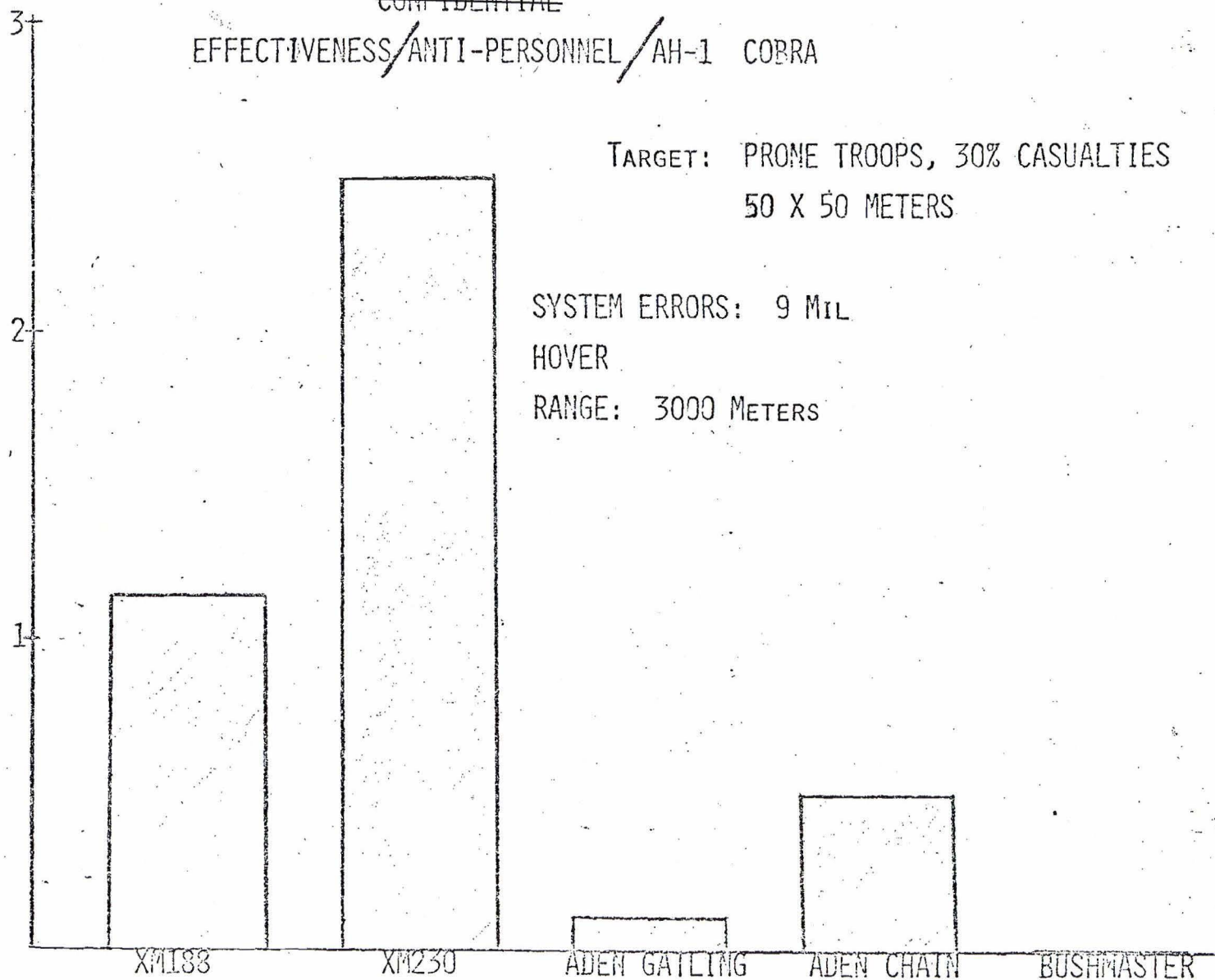
TARGET: PRONE TROOPS, 30% CASUALTIES
50 X 50 METERS

SYSTEM ERRORS: 9 MIL

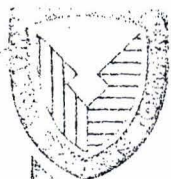
HOVER

RANGE: 3000 METERS

NO. OF
TARGETS

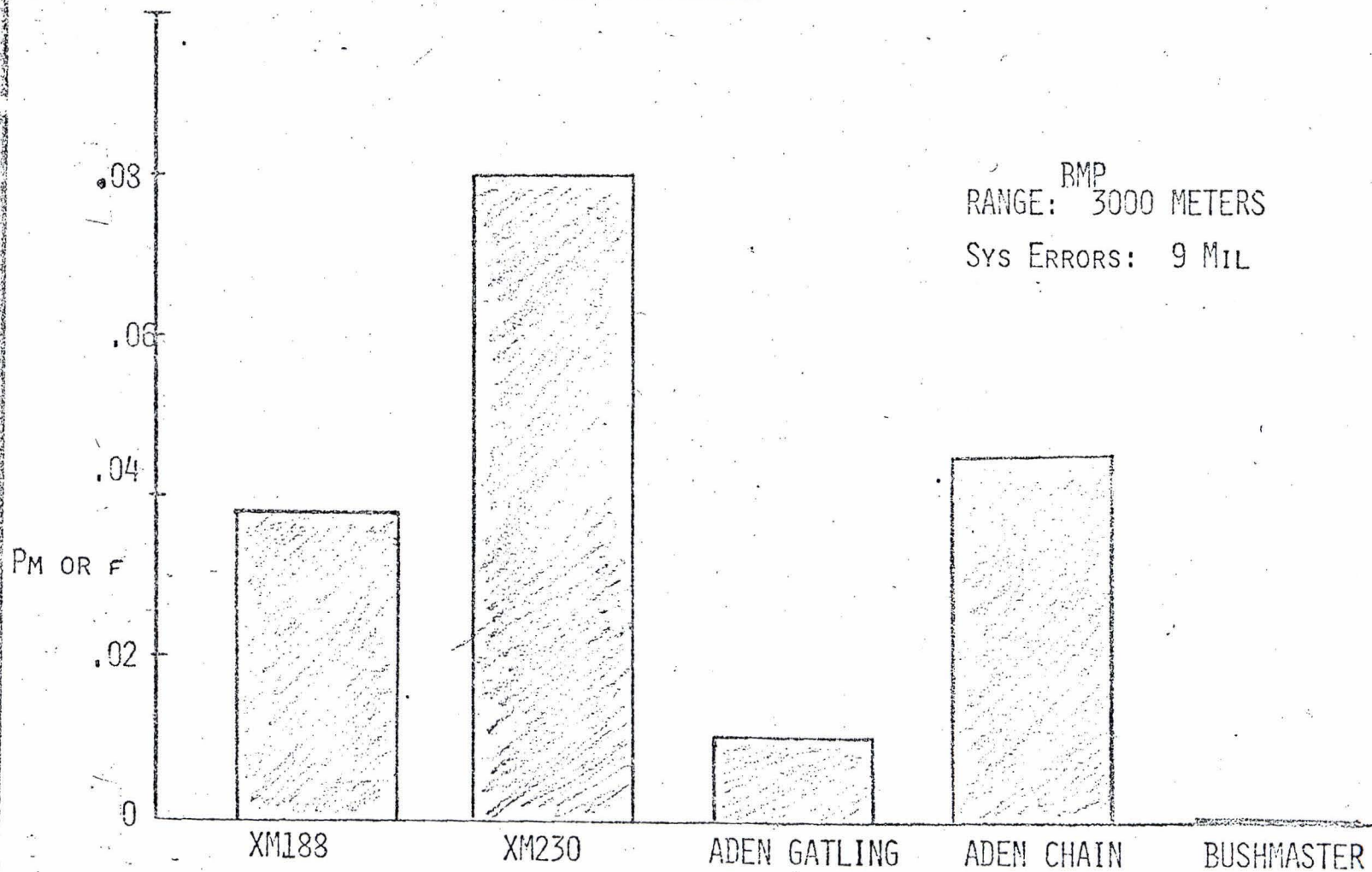


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AH - 1 COBRA
EFFECTIVENESS
ANTI-MATERIEL

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RMP
RANGE: 3000 METERS
SYS ERRORS: 9 MIL

~~CONFIDENTIAL~~



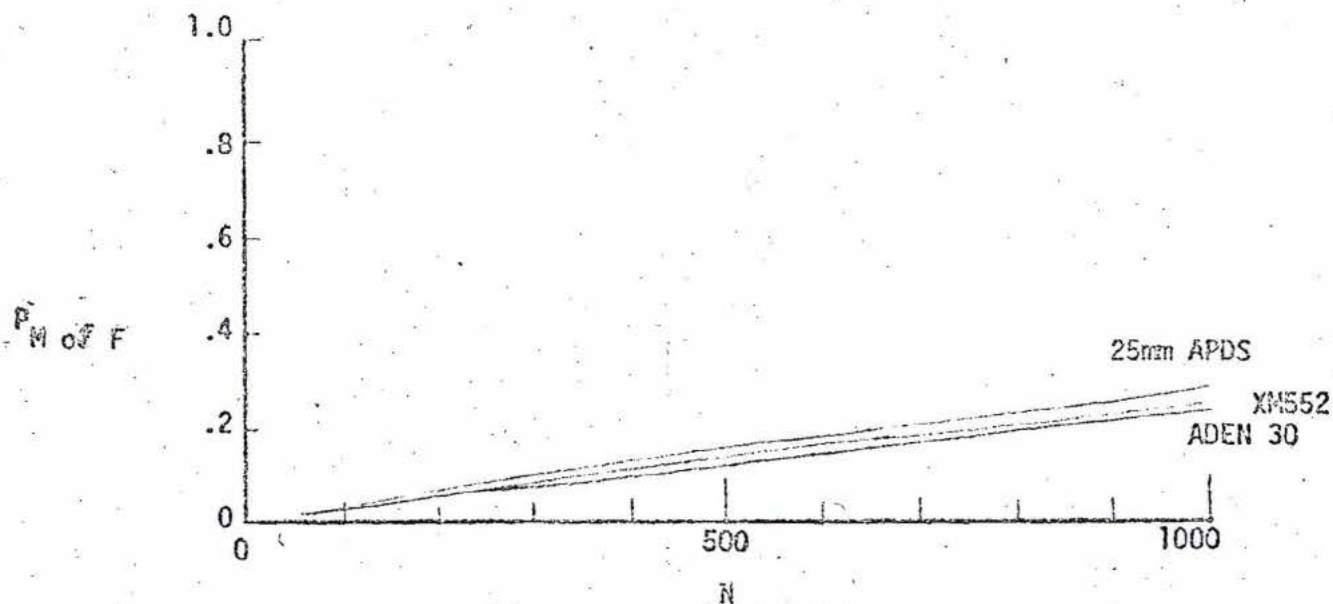
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EFFECTIVENESS

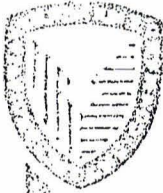
PROBABILITY OF A MOBILITY OR FIREPOWER KILL VS. NO. OF ROUNDS

BRDM

System error.....6 m (6)
Range error.....1% (6)
Aft Velocity.....Hover
Firing range.....3000 m



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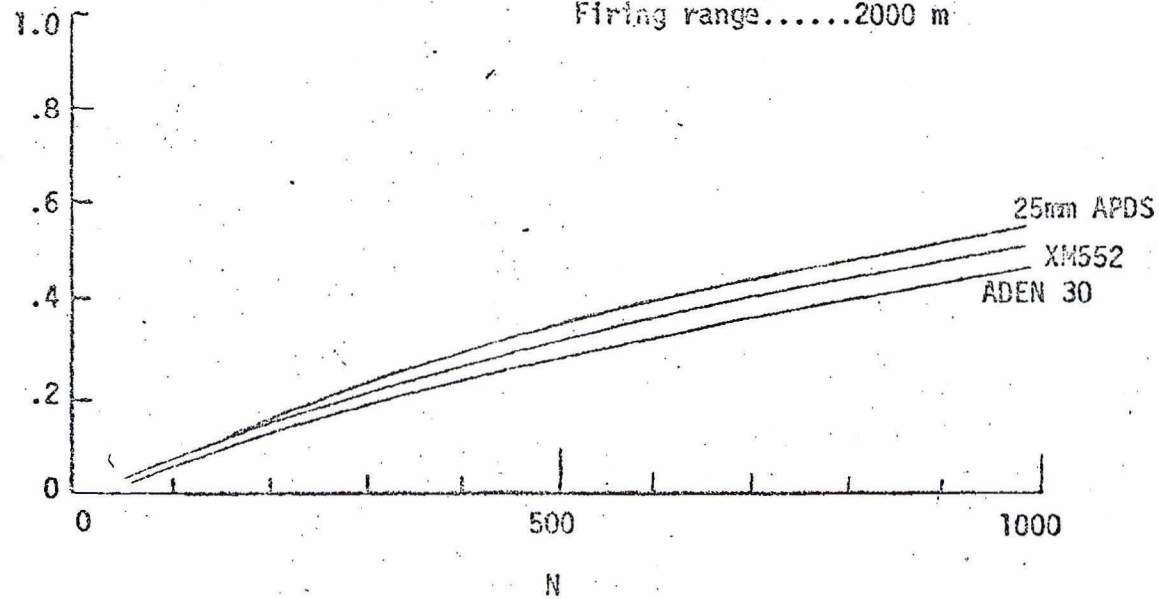
EFFECTIVENESS

Probability of a Mobility or Firepower Kill
vs. Number of Rounds

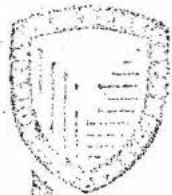
BRDM

System error.....6 m (6)
Range error.....1% (6)
Acft Velocity.....Hover
Firing range.....2000 m

P_M or F



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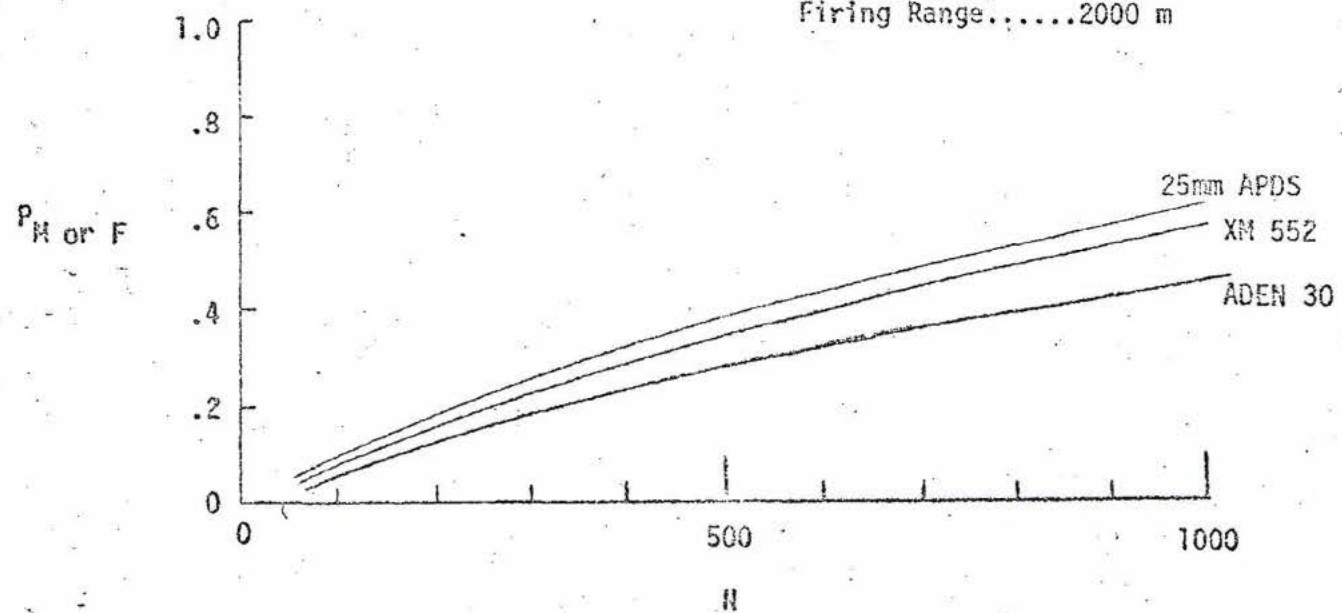
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EFFECTIVENESS

Probability of a Mobility or Firepower Kill
vs. Number of Rounds

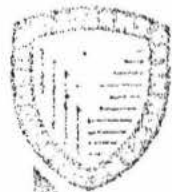
BNP

System error.....6 m (6)
Range error.....1% (6)
A/cft velocity.....Hover
Firing Range.....2000 m



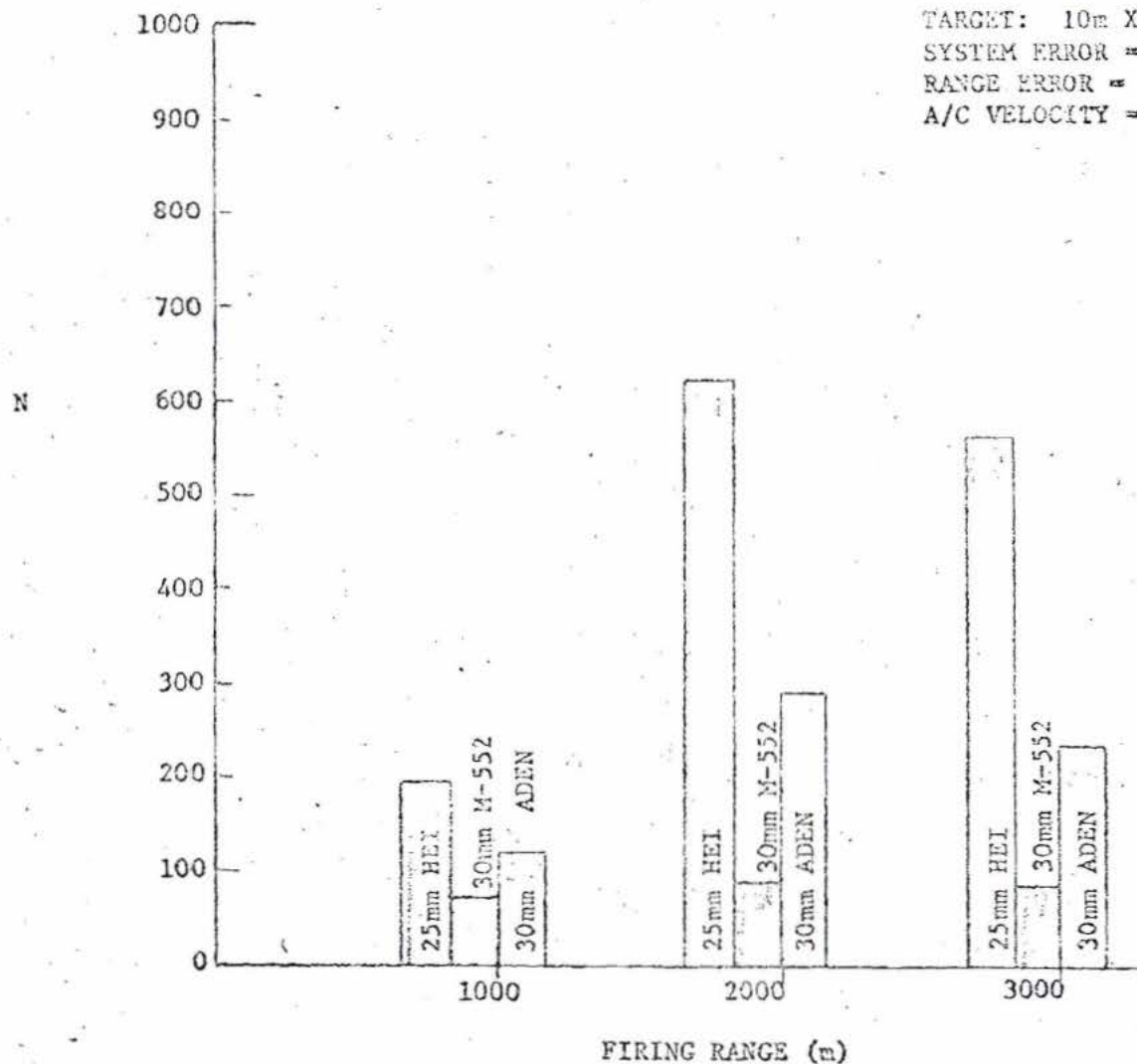
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(Classified Reproduction at AUM Field Printing Plant)



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TARGET: 10m X 10m (PRONE)
SYSTEM ERROR = 6 m (6)
RANGE ERROR = 1% (6)
A/C VELOCITY = HOVER



EXPECTED NO. OF ROUNDS (N) REQUIRED TO ACHIEVE 30% CASUALTIES VS. FIRING RANGE

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(Classified Paper Production at AVS for Field Printing Plant)



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CONCLUSIONS

* EFFECTIVENESS

THE 30MM XM552 HEDP PROJECTILE PROVIDES THE
ATTACK HELICOPTER WITH THE GREATEST OVERALL
EFFECTIVENESS FOR A TURRETED CANNON WHEN
CONSIDERED AGAINST PERSONNEL TARGETS AND
MATERIEL TARGETS . . .

...ANSAA

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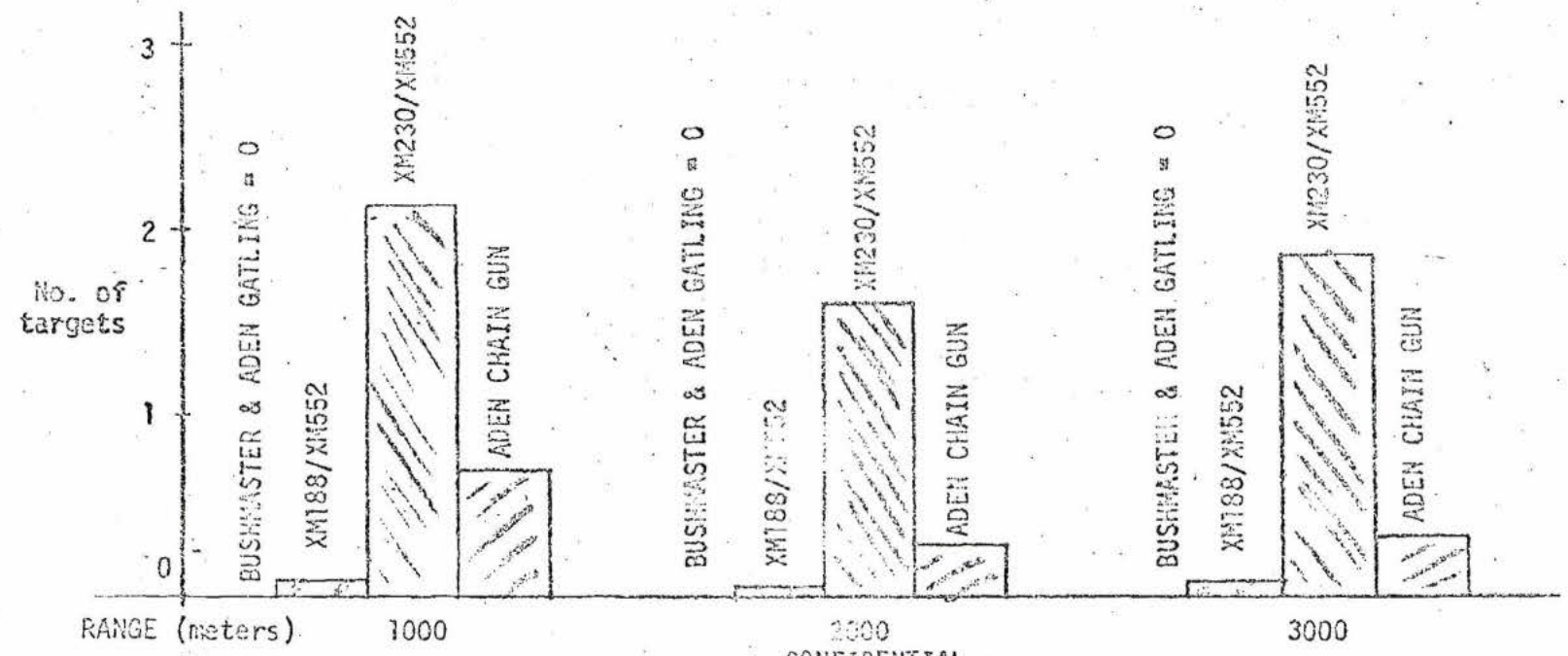
EFFECTIVENESS

ANTI-PERSONNEL

AH-1R COBRA

Target: 10 x 10 m
System error: 9 mil
Hover
30% Casualties, prone troops,
5 min. assault.

Performance: 4000 ft/95F/HOGE

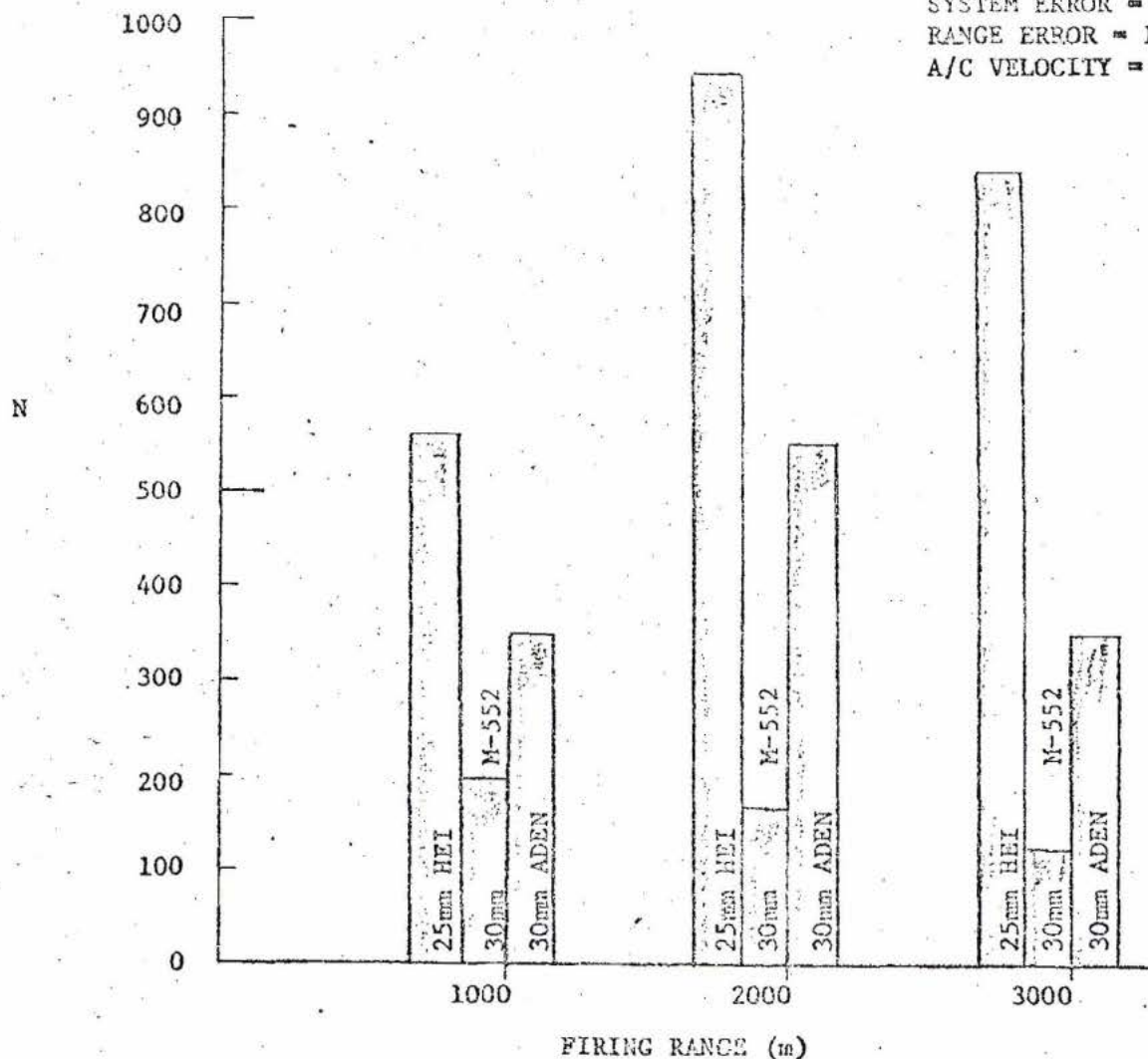


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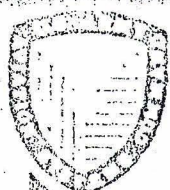
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TARGET: 50m X 50m (Prone)
SYSTEM ERROR = 6 m (G)
RANGE ERROR = 1% (C)
A/C VELOCITY = HOVER



EXPECTED NO. OF ROUNDS (N) REQUIRED TO ACHIEVE 30% CASUALTIES VS. FIRING RANGE

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EFFECTIVENESS

AH-1S
COBRA

ANTI-MATERIEL

Range: 2000 m
Hover
System error: 9 mil

BMP



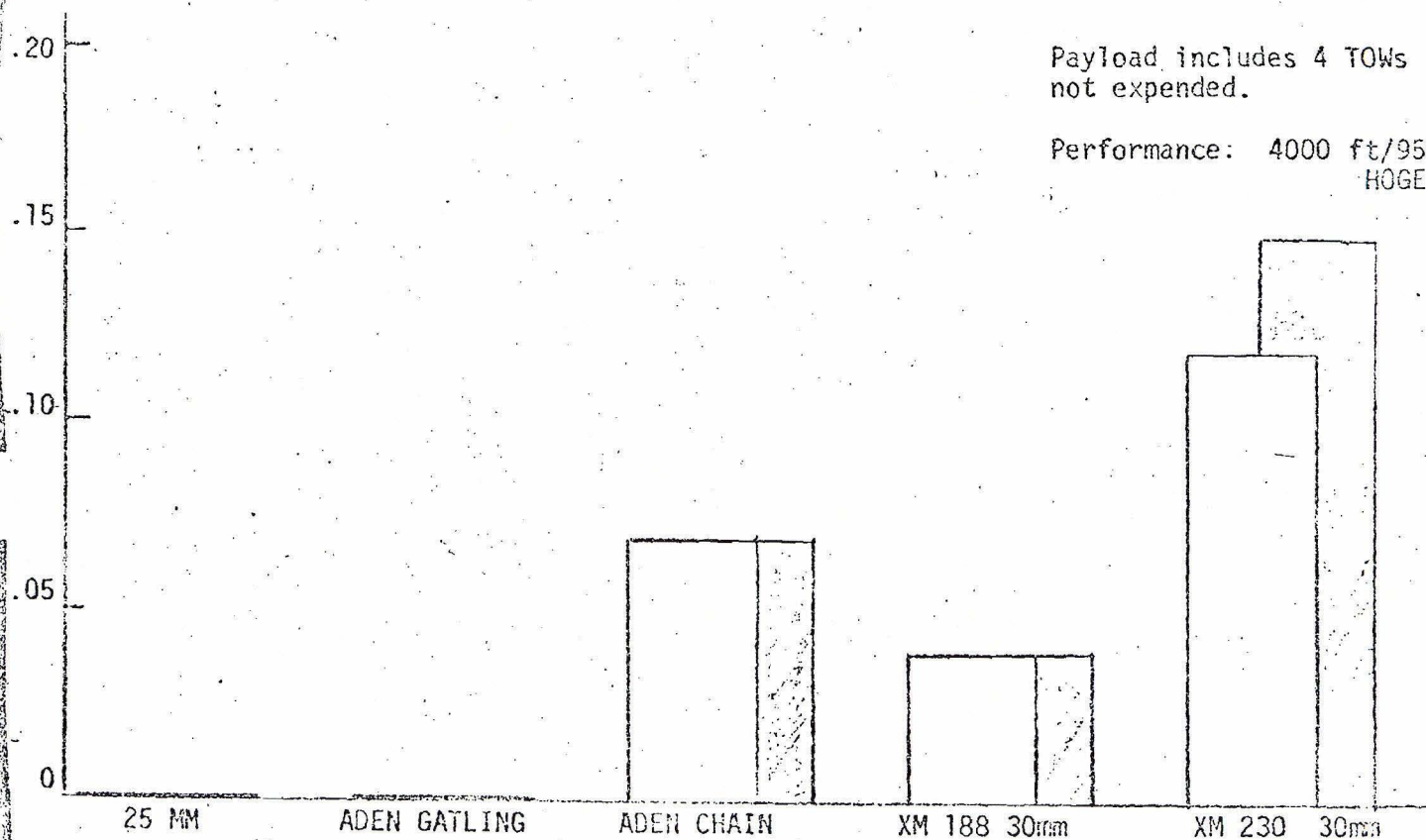
BRDM



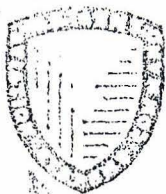
Payload includes 4 TOWs
not expended.

Performance: 4000 ft/95F/
HOGE

P_m or P_f



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EFFECTIVENESS

ANTI-MATERIEL

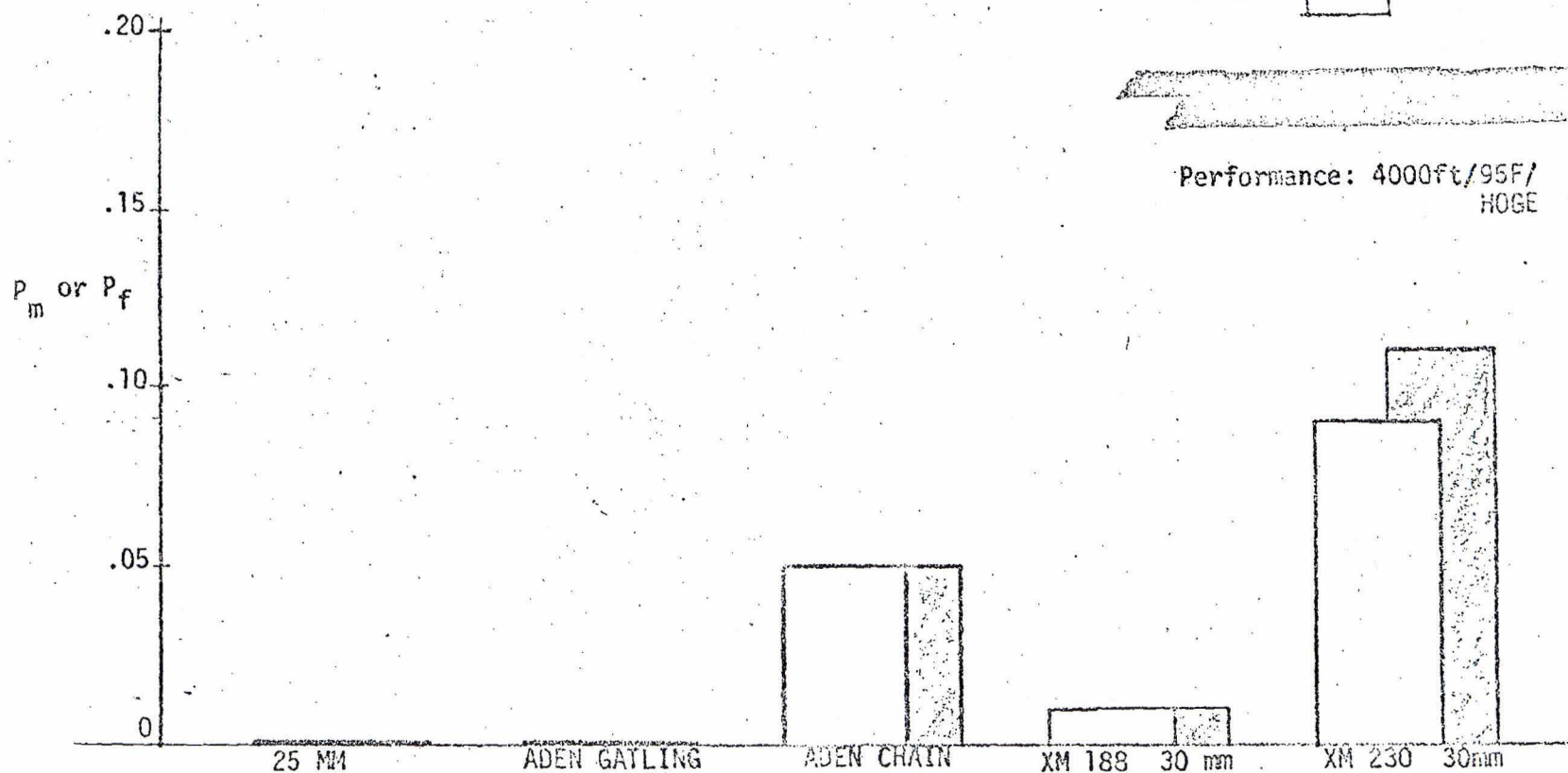
AH-1R COBRA

Range: 2000 m
Hover
System error: 9 mil

BMP

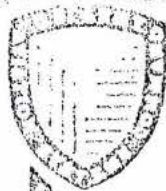


BRDM



Performance: 4000ft/95F/
HOGE

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EFFECTIVENESS

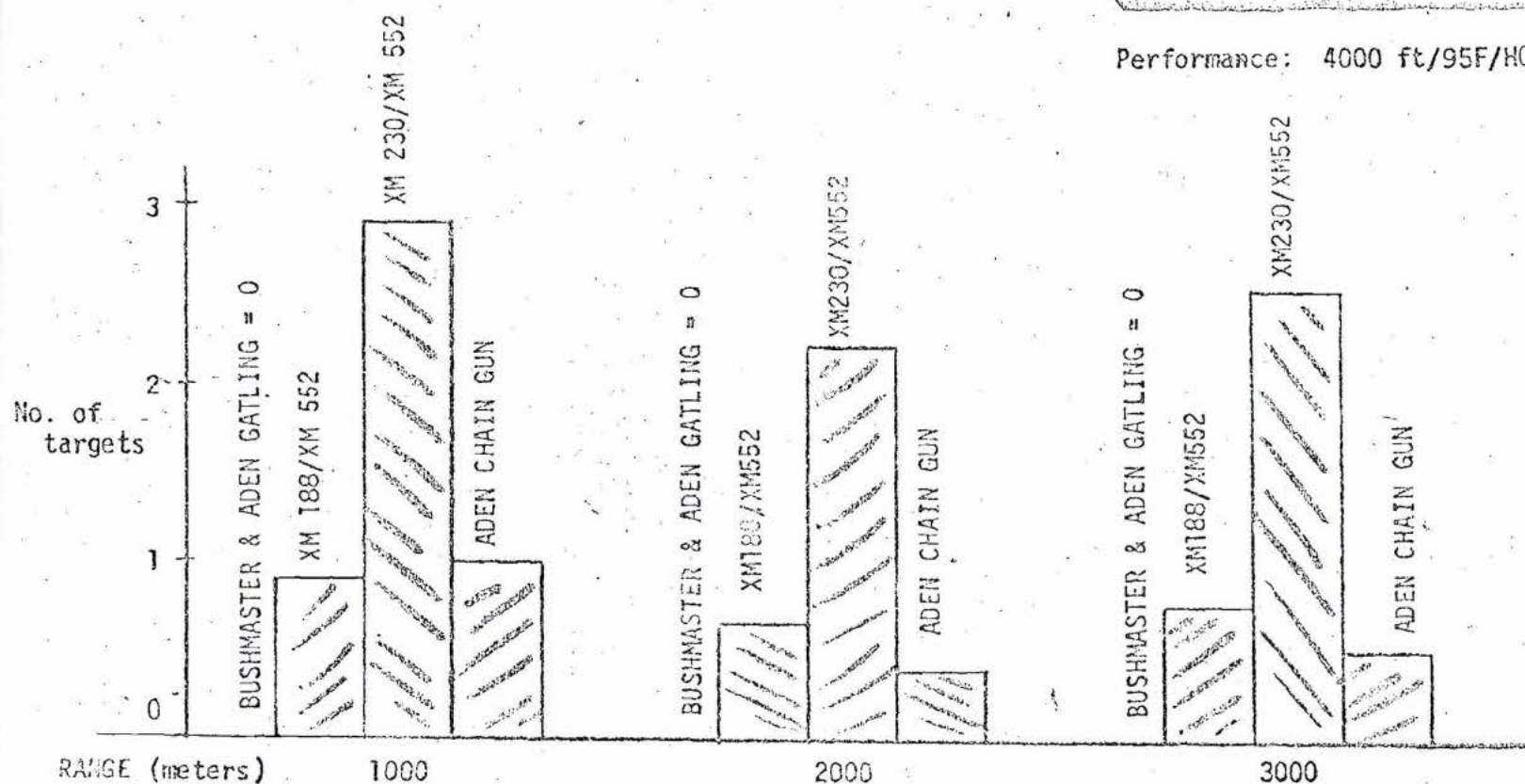
ANTI-PERSONNEL

AH-1S COBRA

Target: 10 x 10 m
30% Casualties
Prone troops
5 min. assault.

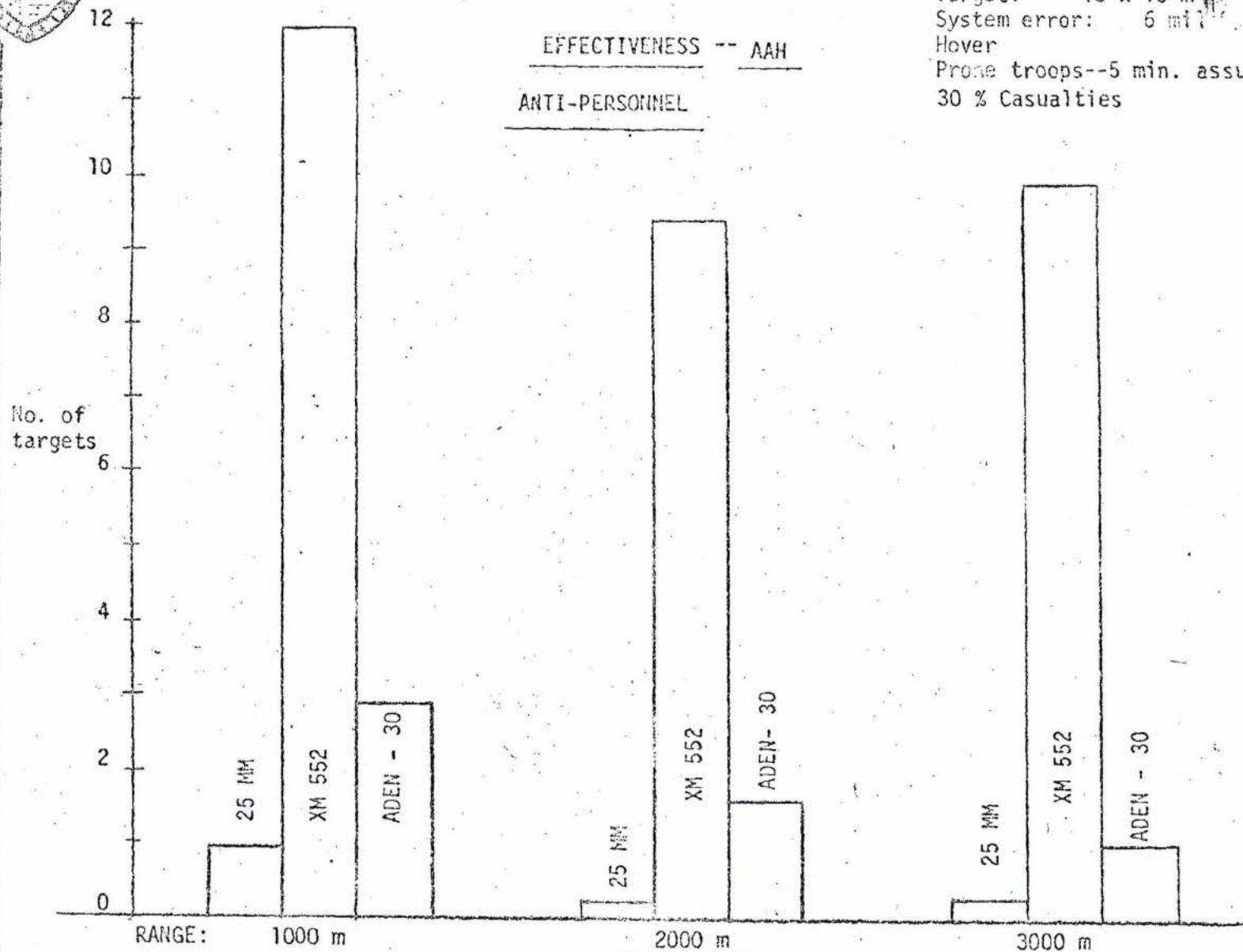
System error; 9 mil
Hover

Performance: 4000 ft/95F/HOGE



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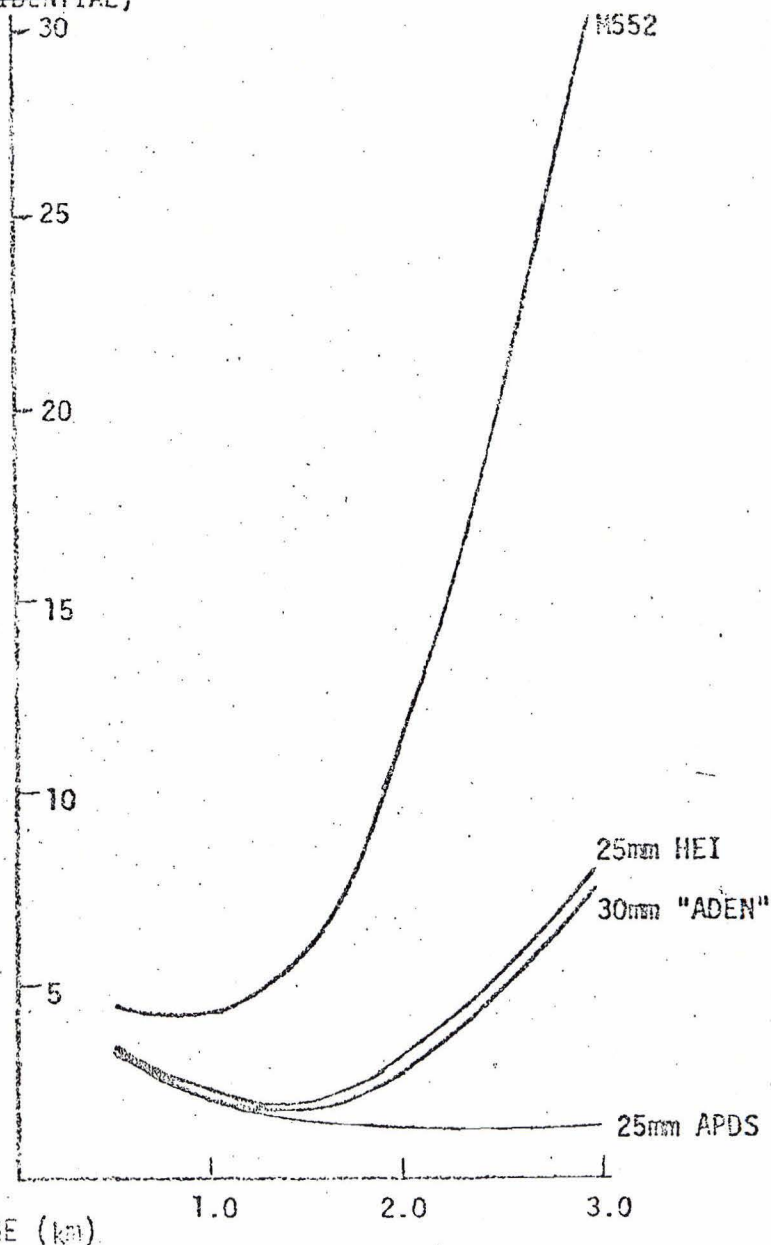
ANGLE OF FALL (ω)

VS.

RANGE

(CONFIDENTIAL)

ω
(deg)



(CONFIDENTIAL)

RANGE (km)

(CONFIDENTIAL)

EFFECTIVENESS

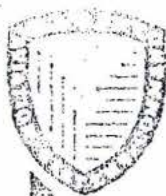


"THE SLOWER, MORE LOOPING TRAJECTORY OF THE XM552 CAUSES A
CLUSTERING OF THE ROUNDS AT LONGER RANGES AND THEREBY
INCREASES THE ON-TARGET EFFECTIVENESS"

(CONFIDENTIAL)

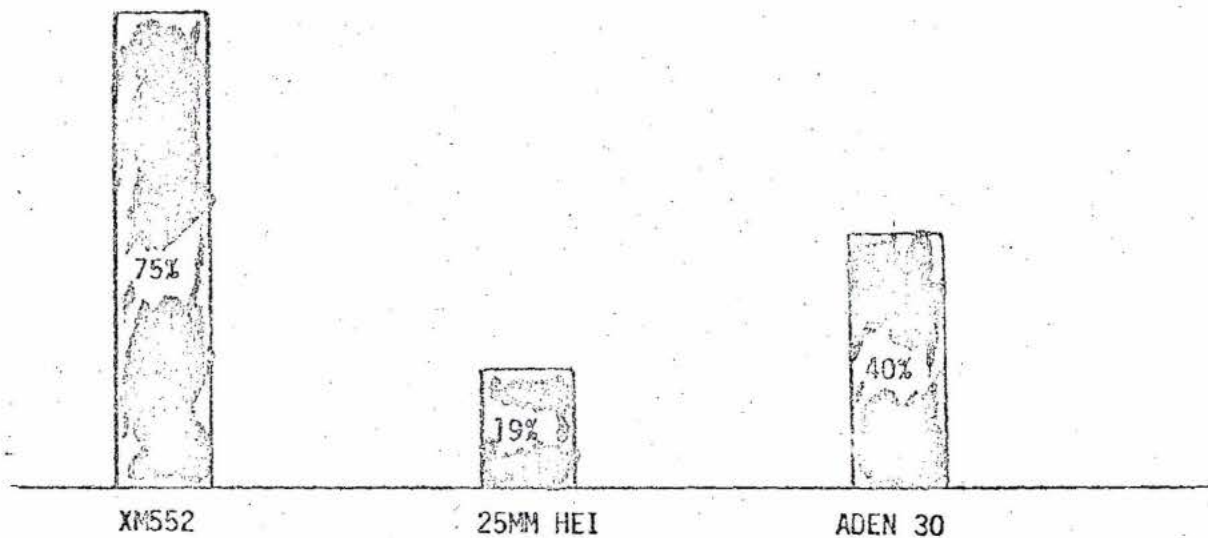
AMSAA

Continued Development of XM552 Wild Firing Position



(CONFIDENTIAL)
EFFECTIVENESS

30MM XM552 HEDP ACHIEVES SIGNIFICANTLY HIGHER LEVELS OF CASUALTIES AGAINST PERSONNEL TARGETS THAN EITHER 25MM HEI OR 30MM ADEN PROJECTILES.



CONDITIONS:

RANGE = 3000M

500 ROUNDS

RANGE EST. ERROR = 1%

50 X 50 M TARGET

SYS ERROR = 6 mil

(CONFIDENTIAL)



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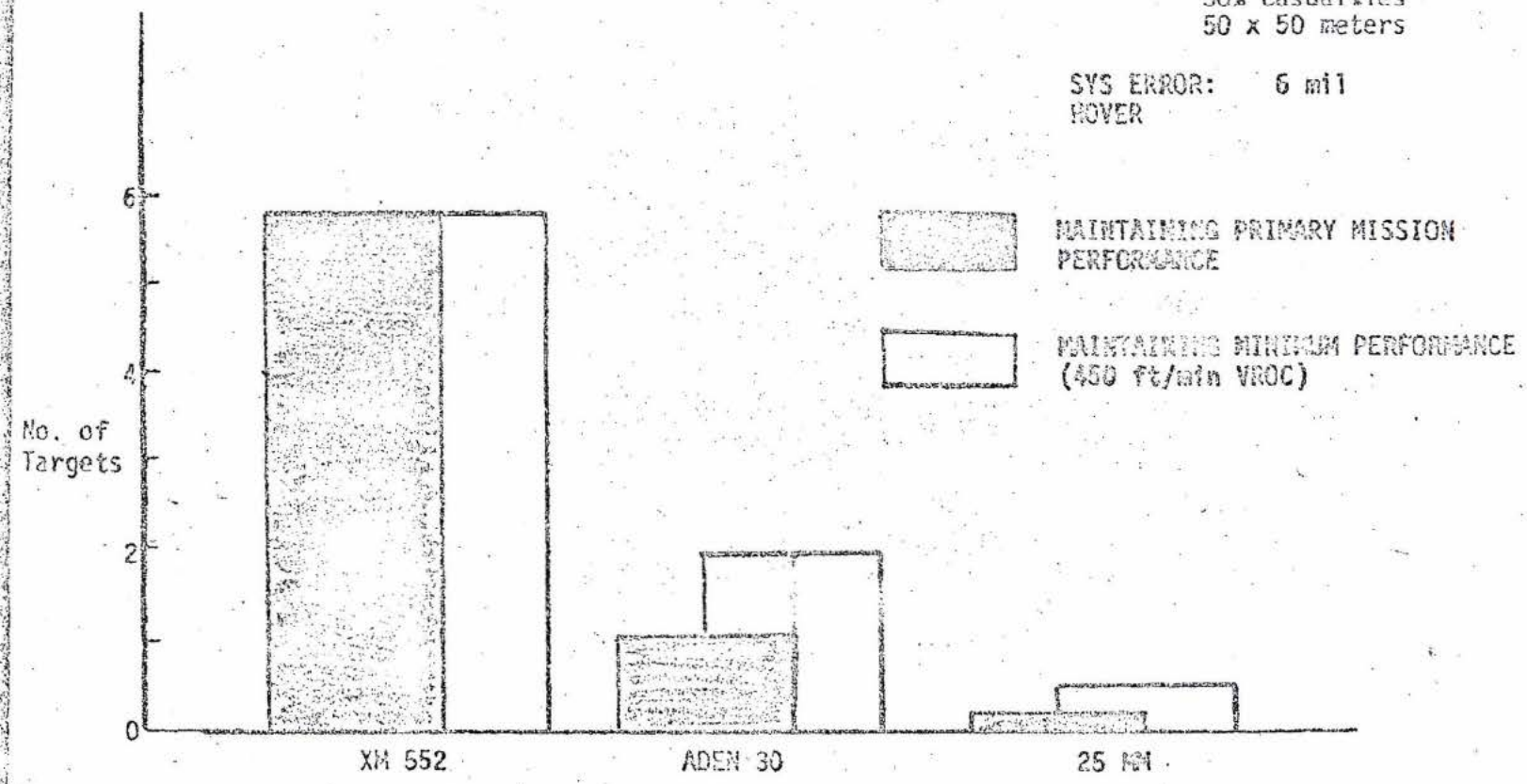
EFFECTIVENESS

ANTI-PERSONNEL

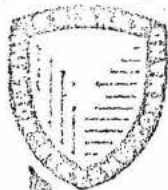
AAH

TARGET; Prone troops
30% Casualties
50 x 50 meters

SYS ERROR: 6 mi
HOVER



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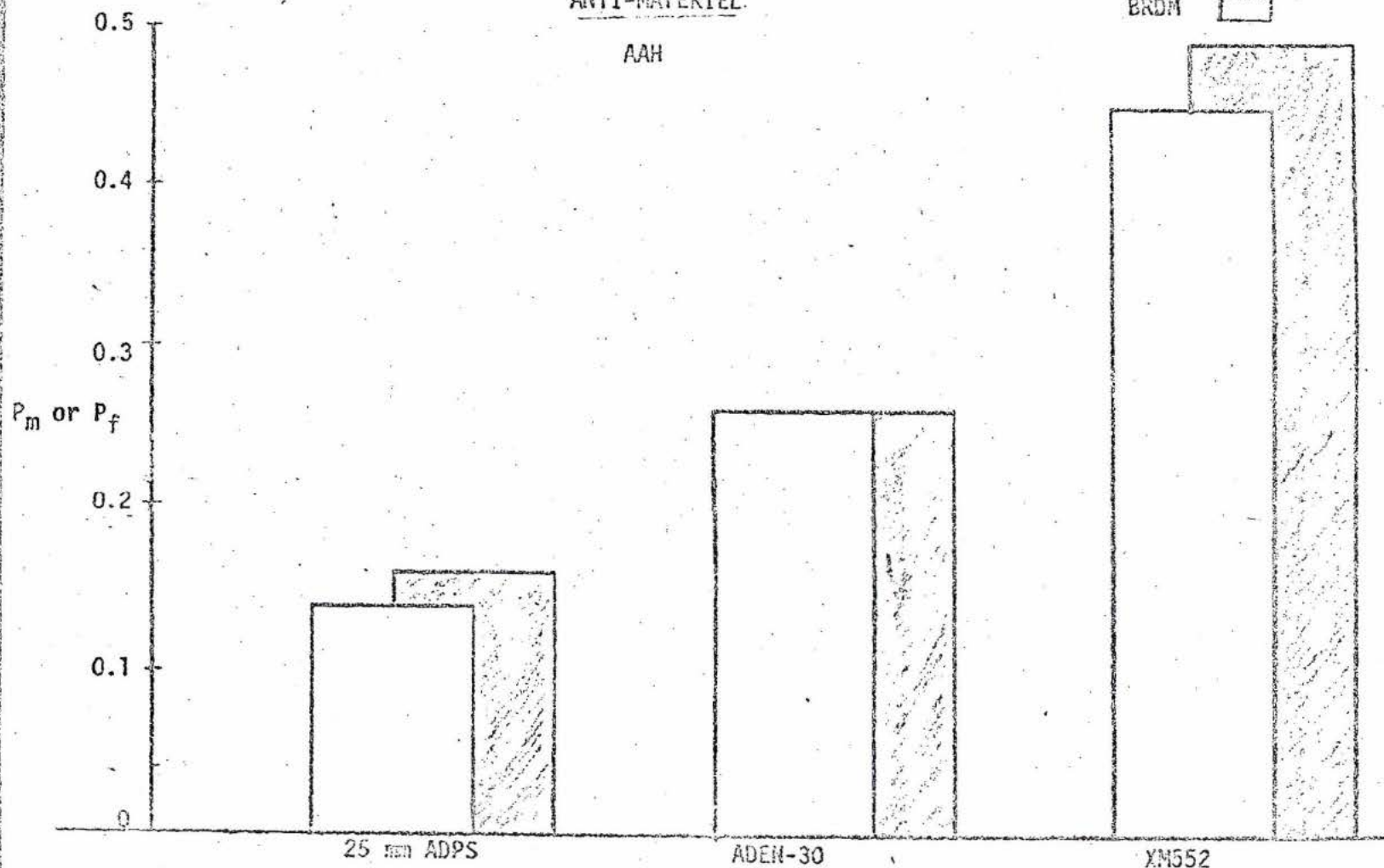
EFFECTIVENESS

ANTI-MATERIEL

AAH

RANGE: 2000 m
HOVER
SYSTEM ACCURACY: 6 m/1
TARGET:

BNP
BRDM



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